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The Director of Central Intelligence

CDP # 0-448

Washington, D.C. 20505

Resource Management Staff

DCI/RM 80-2412  
9 April 1980

MEMORANDUM FOR: Director of Central Intelligence

STATINTL FROM: [REDACTED]  
Director, Information Resources Office

SUBJECT: Project SAFE

REFERENCES: A. Memo from D/IRO to DCI dtd 26 Mar 80,  
same subject (Tab A)  
B. Memo from D/ODP to DCI dtd 26 Mar 80  
Subject: Concerns Regarding SAFE (Tab B)  
C. Your memo of 21 March, Subject: Concerns  
Regarding SAFE  
D. Memo from [REDACTED], Chairman, STAP  
to DCI dtd 18 Mar 1980, Subject: Questions  
Regarding SAFE

STATINTL

1. Supplementing my memo to you, referenced above, I have again conferred with the Director, CSPO, and he has furnished me with copies of Change Order No. 20 which was executed 27 March 1980. This change order appears to me to adequately provide for the satisfaction of the requirement for the interconnection of the CIA and DIA SAFE systems for IOC.

2. I have also had an opportunity to review the referenced memorandum to you from Bruce Johnson, D/ODP, and Clarus Rice, D/OCR, and I concur in the manner in which they respond to your concerns.

3. As the project progresses, the IOC characteristics of the system are becoming defined with greater precision. Good management practice dictates that we proceed to IOC implementation without any substantial changes in the basic design concept. However, as pointed out in my previous memo to you on this subject, the design-to cost approach which was adopted has resulted in the necessity for deferring for later implementation some of the capabilities of the system embodied in the original design concept. I believe that the SAFE Project Office will soon be in a position to define fairly specifically which capabilities

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will be deferred if current funding levels are adhered to. We are giving strong consideration to including this as an agenda item for our FY 82-86 Program Review.

 STATINTL

Attachment:  
Tabs A & B

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Washington, D.C. 20505

Resource Management Staff

IHC/MM 80-2408  
26 March 1980

MEMORANDUM FOR: Director of Central Intelligence

VIA: Deputy to the DCI for Resource Management

STATINTL FROM: [REDACTED]  
Director, Information Resources Office

SUBJECT: Project SAFE

REFERENCE: A. Your memo of 21 March, Subject: Concern  
Regarding SAFE (Tab A)

STATINTL B. Memo from [REDACTED], Chairman, STAP  
to DCI dtd 18 Mar 1980, Subject: Questions  
Regarding SAFE (Tab B)

1. I appreciate the opportunity to comment on the issues raised by the STAP Panel in connection with the SAFE Project. As background to our comments, I should point out that last year, after discussions between the D/DCI/RM, the DDCI, and DDA, it was determined that the focus of our interest in SAFE was to be "the areas of resource allocation and the relationship of SAFE to other programs on a Community-wide basis."\* Although we have continued to review the development of Project SAFE, our primary attention has been in accordance with the above quoted limitations. Consequently, we are not prepared to comment, except in general terms, on many of the concerns raised in the referenced STAP memorandum.

2. Of the four principal concerns listed in your memo of March 21st, only one falls within the scope of IRO's responsibility as set forth in paragraph 1 above, namely:

"What actions are underway to ensure that the Intelligence Community has access to CIA SAFE and that CIA SAFE has access to DIA SAFE as well as such systems as COINS and SOLIS?"

\*Memo from DDCI to D/DCI/RM dated 16 March 1979, Subject: Project SAFE

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These lines  
be addressed because:

- o At the DCI's semiannual review in May 1979, it was stated that a direct physical link between the DIA and CIA systems would be provided.
- o Our review of the current version of the System Requirements Specifications indicates that such a communications connection between CIA and DIA SAFE systems is not included in the specifications.
- o I have discussed this deficiency to the attention of the SAFE Project Manager and he states that such a requirement will be added by amendment; that, although this has not yet been accomplished, such an amendment will be prepared in the near future.

4. We believe that it is crucial to the ultimate development of the types of intercommunication which are set out in your subject memorandum that this requirement be now formalized in the SAFE documentation since, if properly specified, it will provide the technical capability to enable:

- o CIA analysts to access DIA files.
- o CIA analysts to access other Community files through the DIA SAFE interface with the COINS network which is included in the current requirements documents.
- o DIA analysts to access CIA SAFE files.
- o Analyst to analyst communications between DIA and CIA analysts.
- o The capability to permit other Intelligence Community components to access CIA SAFE facilities by going through the DIA interfaces with the COINS or AUTODIN networks.

5. It should be noted that the provision of the physical links and the technical capabilities to accomplish the above listed functions will not, in and of itself, result in the implementation of any of these functions. None of the SAFE documentation, either emanating from DIA or CIA, calls for these functions to be provided. Indeed, the original CIA SAFE documentation specifically provides that the CIA SAFE system will be a closed system accessible only by CIA personnel. The position has been taken by some that CIA has no validated requirement for access to any non-CIA system, including DIA SAFE. The results of

the IHC-sponsored Analyst Support Study indicate that this is probably not the case. Nearly half of the CIA analysts interviewed said they regularly access outside data bases such as SOLIS, the COINS files, CIRC II, and the NPIC data system. Furthermore, analyst-to-analyst communication across agency lines was ranked the second most important source of information by CIA analysts and the most important source by DIA analysts. As automated systems develop and improve and analysts become increasingly confident in their use of and reliance upon direct access to automated systems, requirements for and the value of access to external systems should increase still further.

6. The management of the Consolidated SAFE Project Office is working under a handicap in this area. There has been, to our knowledge, no extensive formal review or update of CIA's functional requirements on the user side since the decision was made to combine the two programs. Without any formal statement of requirements from the CIA analytical community (primarily NFAC) which the system is designed to support, it is difficult for those charged with designing and implementing the system to anticipate what those needs may be. Therefore, we suggest that either you or some other appropriate authority should give to the SAFE Project Office some appropriate guidance which addresses these areas of concern.

7. We would call to your attention the fact that providing any access to the CIA system from DIA and more especially from elements of the Intelligence Community outside of DIA raises serious security issues. The resolution of these issues will probably require action on your part to modify the present interpretation of existing security policies, or in some cases amendments thereto. If you should decide that the combined SAFE systems should provide the types of intercommunication and outside access which are outlined in your areas of concern, then someone (possibly the Computer Security Subcommittee of the DCI Security Committee) should probably be tasked with the responsibility of defining the security issues, suggesting possible solutions, and performing appropriate risk analyses so that they may be submitted to you for resolution. If this is undertaken, IRO should probably be involved in some way since decisions on these issues will undoubtedly have major long-term effects on the feasibility of improving the interagency exchange of information and could also have a substantial impact on the resources which will be needed to satisfy Community ADP requirements.

8. General comments on other concerns expressed by you based upon our limited perspective are:

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- o We are informed that [REDACTED] of OCR is coordinating the CIA user interface with the CSPO; that he is completely aware of the status of the project and consults regularly with the CSPO.
- o In the development of a project such as SAFE, it is extremely important that a well defined single point of contact between the users and developers be established and maintained. Otherwise, the system developers will be faced with conflicting statements of requirements.
- o If, in fact, the established lines of communications with the users are not adequate, perhaps the reason is attributable to a lack of an effective framework within NFAC to provide a continuing review of SAFE as it develops. If this is the case, we are not aware of it.
- o We see no evidence that "major portions of the proposed operational capabilities are unspecified." It is, however, probably true that NFAC should direct more attention to the general issue of what its requirements for open source material are and how these should be met, either through SAFE or other means.
- o The decision to place SAFE on a design-to-cost basis necessarily implied some scaling down of the original requirements for the initial version. In consonance with this, NFAC did review and set priorities on the original SAFE requirements.
- o It is our assessment that the CSPO is proceeding with development so that NFAC's highest priorities will be met first and the design will accommodate the later addition of those functions which now enjoy a lesser priority.
- o If some of the capabilities which this approach will require to be deferred are considered to be important enough to warrant it, NFAC should develop a justification for their inclusion in the initial version of SAFE and the issue should be addressed during program review.

9. In conclusion, I would take this opportunity to inform you of two initiatives we are taking in conjunction with the IHC which may have an impact on the future development of SAFE.

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- o The development of a user language for SAFE will result in a common user language for DIA & CIA. We are exploring the possibility that this could become the initial step for developing user language standards for use throughout the Community. This will require the cooperation of the SAFE Project Office if it is to succeed.
- o We expect the IHC to recommend the development of a distributed system of bibliographic information storage and retrieval systems. If this is to be done, the facilities of both the DIA & CIA SAFE systems in this area will have to function as part of an overall Community system. If this is to be accomplished, the interconnection of the two systems could taken on added importance.

NTL



MEMO

ODP 0-369  
26 March 1980

MEMORANDUM FOR: Director of Central Intelligence  
VIA: Deputy Director for Administration  
Director, National Foreign Assessment Center  
FROM: Bruce T. Johnson  
Director of Data Processing, DDA  
Clarus W. Rice  
Director of Central Reference, NFAC  
SUBJECT: Concerns Regarding SAFE  
REFERENCE: Your memo dtd 21 March 1980, same subject  
(ExReg 80-754/1)

1. This memorandum responds to your query of 21 March 1980, transmitting some questions about SAFE posed by your Science and Technology Advisory Panel (STAP).

2. Attached are answers to the specific questions raised by the STAP, presented in a narrative form reflecting the complexity of some of the issues they addressed. These answers represent the coordinated views of OCR and ODP, reviewed and endorsed by the DDA and the Director, NFAC.

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3. At our meeting with you, now scheduled for 3 April, we propose that Mr. [REDACTED] Director of the Consolidated SAFE Project Office (CSPO), present a brief summary which addresses the four concerns you list in your memorandum, after which we will be prepared to elaborate on any of those or other STAP questions about SAFE. We will also have available Mr. [REDACTED], Chief of OCR's Systems Analysis Staff, to discuss NFAC's extensive efforts to identify user requirements.

4. We understand that Messrs. [REDACTED] will be at the meeting, and welcome the opportunity to discuss their questions with them. We would like to suggest, however, that it may be profitable for us to spend some additional time with them subsequent to our joint meeting

SUBJECT: Concerns Regarding SAFE

with you, to supplement the one short briefing previously provided for them by SAFE's managers.

/s/ Bruce T. Johnson  
Bruce T. Johnson

Clarus W. Rice

CONCUR:

Deputy Director for Administration

Date

STATINTL

26 MAR 1980

Director, National Foreign Assessment Center

Date

Attachments: a/s

cc: D/CSPO

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CONCERN:

2.0 How is SAFE management ensuring that a final working system has been developed from the continuing evolution of an operationally valid pilot system? How has SAFE taken advantage of the experience of similar, very large systems in their:

- 1) system architecture,
- 2) communication and control, and
- 3) changing performance requirements?

How is SAFE management ensuring that the system will:

- 1) make available data on operation and usage of the pilot system to guide development;
- 2) be able to modify both system functions and interaction capabilities so as to meet changing and evolving requirements; and
- 3) be able to add new functions and interactions so as to meet new requirements.

RESPONSE:

2.0 The "operationally valid pilot system" from which evolution will take place is the system which will be delivered at IOC in December 1982. Experience with the "Interim" SAFE system inaugurated in 1973 is being used in building the operational system. Data and usage patterns, message and query analyses as well as user reactions are used in requirements specifications, system sizing, function allocation and usage scenario development. In order to ensure adaptability to changing needs and growth, we have dictated the maximum use of general-purpose computers and software.

The system architecture proposed is the result of an 18 month design competition between [REDACTED] and is based STATINTL on [REDACTED] and Government experience with large systems. It distributes communications and control functions as well as file processing such that bottlenecks are avoided and parallel expansion is possible without redesign. New functions may be added at either the top or mid-level processors. Functions may be moved between levels to compensate for loading or usage changes.

We expect the initial system to have shortcomings. All major systems do. We expect, however, the initial system to provide significant improvements in service and value over the current environment.

Response to Questions and Comments from Science and Technology Advisory Panel Memorandum of 18 March 1980.

CONCERN:

1.0 What steps are being taken to ensure that the Agency, rather than the contractor is in control of the technical aspects of the design of the system?

RESPONSE:

1.0 The Agency has in place a strong technical management team. The contract effort is under control and the needs of two Agencies are being addressed successfully. In recognition of the problems of technical communication and management control compounded by geographic separation a number of steps have been taken as follows:

- a) The Government has contracted for a system development rather than technical effort. The contractor is responsible for that development with government controls. The Government defines the functions and performance of the system as seen from a user's perspective. The development is performed to government requirements specification in accordance with MIL Stds. 490 and 1521 with government approval required of all specifications and designs. The Government approves all solicitation documents, evaluation plans and contract awards by STATINTL
- b) Monthly formal project reviews are conducted by the Consolidated SAPE Project Office (CSPO). Technical staff interaction daily by phone and virtually continuously through travel maintains communication. The contractor has several permanent representatives located in Rosslyn, headed by a deputy project manager for East Coast operations.
- c) Delays in decision making are not geographical problems. They are problems associated with hard choices. An on-site representative could provide oversight and some guidance but those problems of larger scope are not one-man problems. A full time government representative is being considered for transfer to California. Travel will continue to be heavy in any event.

2.0 - Continued

The cautionary note in the STAP memorandum is well founded. We should expect to take up to a year to introduce the system services after which the system will continue to evolve. The SAFE budget for 1982 and beyond recognizes this process.

CONCERN:

3.0 The SAFE user community consists of Intelligence Community analysts covering the full spectrum of research into foreign political, military, economic, scientific, and technological activity. Their effective use of this system and, ultimately, the quality of intelligence they produce rest on whether their real needs can be identified and satisfied by the system.

RESPONSE:

3.0 There has been more user involvement in the definition of the SAFE System than in any computer system of which we are aware. The interaction is continuing to refine and revalidate the system functions with the user. The CSPO maintains the balance of interactions with the contractor and - through OCR's System Analysis Staff and DIA's user points of contact - the users.

The Consolidated SAFE Requirements Document, which is the foundation of the technical development, was developed with and largely by the using NFAC and DIA community.

In the CIA this work began in 1972 and has included:

- o Pilot groups of 50 analysts defining useful functions
- o Pilot systems development in 1973/4
- o Pilot branches to date provide usage data
- o User workshops in 1975
- o 600 analyst survey in 1976
- o SAFE Procedures Development Laboratory
- o Project Upstairs/Downstairs with analysts
- o Newsletters
- o Direct interaction with CSPO and contractor of NFAC user representatives

3.0 continued

STATINTL

In DIA there are 29 points of contact in user organizations who provide advice on requirements and are fully informed of project status. An extended data collection effort from 1977 to the present has developed user requirements which have been staffed with top level user management.

All data gathered on the interim system usage and voluminous data on DIA's DIAOLS system have been forwarded to [REDACTED]. All prior study material has likewise been forwarded. These data are used to develop system design and flow threads.

Four former analysts are resident in the CSPO to focus and control the flow of requirements and to ensure that they are met. This group coordinates heavily with both Agencies.

We believe that a "community" system should be developed after SAFE and that SAFE would be a prototype for replication and potentially be a node in a community network.

Training of users, operators and instructors is part of the system development contract. Both the Office of Training and NFAC will have instructors trained to support continuing operations and expansion of the user community. The Office of Data Processing will have operations personnel trained as a part of this effort.

CONCERN:

4.0 How can the Agency make a reasonable evaluation of the current status of SAFE with major portions of the proposed operational capabilities either unspecified or uncommunicated to the Agency? For example,

- 1) the user command language and its parsing,
- 2) the user programming language,
- 3) the user editing languages, and
- 4) procedures for backup, including regeneration of derived files lost in crashes.

RESPONSE:

4. All operational capabilities required, including user languages and backup capabilities, are specified in the Consolidated SAFE Requirements Document written by the Government. The contractor's translation of those capabilities to system design are encompassed in numerous system, sub-system and element specifications. These are being developed on schedule with a normal amount of difficulty. Problems are addressed early in the process and corrective action is taken. For example, the plan for language development was delayed due to misunderstandings which required several meetings. This effort is now on the road to satisfactory resolution. Contract schedule, cost and management are all monitored for signs of difficulty.

CONCERN:

5.0 What actions are under way to insure that the Intelligence Community has access to CIA SAFE and that CIA SAFE has access to DIA SAFE as well as such systems as COINS and SOLIS?

RESPONSE:

5.0 The basic system requirement has been given the contractor to provide interconnection between the two Agencies. Five lines will be provided with expansion capacity to 25. The control of access, differing security clearance practices and control of limited access information will have to be worked out among the using and security organizations of the Agencies. With the security features of the system being developed, it is hoped that administrative procedures and software safeguards will be adequate.

CIA SAFE consists of:

- o The private files, mail files, route files, and the other specific files in SAFE are designed to satisfy the needs of individual analysts and have limited meaning to other analysts. The tools that SAFE provides to manipulate these files can, however, be put to use by other Intelligence Community Agencies to satisfy the particular needs of their analysts.
- o The major Central File (RECON/AEGIS) of the CIA portion of SAFE is under consideration for being accessible by Intelligence Community analysts. Portions of this file are already available on COINS.
- o The link between NFAC and DIA will be used initially as a tool to coordinate intelligence reporting between the two agencies. Eventually, file sharing may take place if deemed useful by individual analysts.

Generalized community access has not been envisioned in the initial system and presents additional security and, more vitally, loading problems. As already noted in response to question 3 we note that a "community" system should be developed after SAFE and that SAFE would be a prototype for replication and potentially be a node in a community network.

STATSPEC

CONCERN:

6.0 How will SAFE deal with open source material? Will [redacted] material, either finished publications or field reporting, be made available to the analyst through SAFE? How will SAFE deal with current newspaper and journal entries?

RESPONSE:

6.0 Newspapers, periodicals, and monographs may be input to SAFE by production and OCR analysts: the item is indexed into the computer data base and the item is stored either locally (drawer, etc.) or in the central microfilm store which is linked to SAFE. Commercial data bases such as MEDLINE, NYTIB, OCLC, NEXIS, SDC, will be accessible through an intermediary. Automatic conversion of selected "hard copy" open source data to machine-readable form is under development.

[redacted] is an input with both finished [redacted] reports and raw input supplied to SAFE. Wire services, if subscribed to, STATSPEC can be added either on-line or as separate collectors for periodic input to SAFE.

STATSPEC

CONCERN:

7.0 What steps are being taken to ensure that SAFE will be designed to allow collaborative usage?

RESPONSE:

7. Teleconferencing will be a part of SAFE. This will be permitted between CIA and DIA as well as within each Agency.

The generalized routing function will also be used for staffing and coordination as well as for further dissemination of information.

As noted in question 5, there are security and access questions yet to be resolved.

CONCERN:

8.0 What steps are under way to ensure that in the procurement of major hardware items, these items will be compatible with existing Agency systems?

RESPONSE:

8. The question of compatibility is complicated by the fact that the CIA and DIA have different hardware. CIA/ODP uses IBM compatible equipment while DIA uses mainly [REDACTED] Compatibility has been factored into the hardware Request for Proposal and a value has been established for cost evaluation. IBM compatible and [REDACTED] vendors thus have a cost advantage roughly equivalent to anticipated cost of supporting varied architectures.

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Interconnection between SAFE and existing systems in each Agency is planned and is part of the contracted effort. The interface software for SAFE has been considered as a direct contract cost.

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